

Application No.: 10/519655
Docket No.: AD6899USPCT

Page 5

Amendments to Claims

1. (Currently amended) A process for ink-jet printing an image onto a rigid thermoplastic interlayer comprising the steps: (a) feeding a rigid interlayer sheet through an ink jet printer and (b) ink-jet printing an image on the rigid interlayer sheet, (i) wherein the rigid interlayer sheet has a Storage Young's Modulus of 50-1,000 MPa (mega Pascals) at 0.3 Hz and 25°C, as determined according to ASTM D 5026-95a, (ii) wherein the rigid interlayer sheet is selected from the group consisting of (A) ethylene/(meth)acrylic acid copolymer ionomer sheets or (B) polyvinyl butyral sheets comprising plasticizer in an amount of less than 30 parts per hundred parts based on the weight of the rigid interlayer sheet, and (iii) wherein the rigid interlayer sheet has a finite thickness of less than or equal to about 0.38 mm about 0.025 mm to about 0.45 mm.
2. (Currently amended) The process of Claim 1 wherein the rigid interlayer sheet is either an ethylene/(meth)acrylic acid copolymer ionomer or PVB polyvinyl butyral sheet comprising plasticizer in an amount of less than 30 parts per hundred parts based on the weight of the interlayer sheet.
3. (Currently amended) The process of Claim 2 wherein the rigid interlayer sheet is an is the ethylene/(meth)acrylic acid copolymer ionomer sheet.
4. (Currently amended) The process of Claim 3 further comprising the step of laminating the image-bearing rigid interlayer sheet with a second interlayer sheet which is non-image bearing, to form a composite image-bearing interlayer, wherein the total thickness of the composite image-bearing interlayer is in the range of from about 0.40 mm to about 2.29 mm.
5. (Currently amended) The process of Claim 4 wherein the image-bearing surface of the rigid interlayer sheet is the surface that is in contact with the surface of the second interlayer sheet.
6. (Currently amended) The process of Claim 5 wherein the second interlayer sheet is an ethylene/(meth)acrylic acid copolymer ionomer sheet.
7. (Original) The process of Claim 6 wherein the second interlayer sheet has a thickness of from about 0.76 mm to about 1.13 mm.
8. (Currently amended) A process for obtaining a decorative laminate comprising the steps: (1) "ink jet" printing pigmented ink onto at least one surface of an interlayer sheet which is a rigid ethylene/methacrylic acid copolymer ionomer interlayer sheet

Application No.: 10/519655
Docket No.: AD6899USPCT

Page 6

- having a thickness of ~~less than or equal to about 0.38 mm~~ about 0.025 mm to about 0.45 mm and wherein the interlayer sheet has a Storage Young's Modulus of 50-1,000 MPa (mega Pascals) at 0.3 Hz and 25°C, as determined according to ASTM D 5026-95a, to obtain an image-bearing interlayer sheet; and (2) laminating the image-bearing interlayer sheet between sheets of transparent materials to obtain a decorative laminate.
9. (Original) The process of Claim 8 wherein the rigid interlayer comprises a roughened surface having a roughness (R_z) of from about 5 μm to about 15 μm prior to lamination.
 10. (Original) The process of Claim 9 wherein the rigid image-bearing interlayer is laminated with one or more other interlayer sheets to yield a composite interlayer having a total thickness of from about 0.40 mm to about 2.29 mm.
 11. (Currently amended) The process of Claim 10 wherein the other interlayer comprises a thermoplastic polymer selected from polymers in the group consisting of: PVB polyvinyl butyral; PET; ~~PU~~ polyurethane; PC; PVC; of ethylene/(meth)acrylic acid copolymer ionomers; and ethylene/(meth)acrylic acid/alkyl acrylates terpolymers.
 12. (Currently amended) The process of Claim 11 wherein the image is printed using a drop on demand (DOD) ink jet printing process.
 13. (Currently amended) The process of Claim 12 wherein the drop on demand DOD process is a piezo electric process.
 14. (Currently amended) The process of Claim 12 wherein the drop on demand DOD process is a thermal ink jet printing process.
 15. (Original) The process of Claim 11 wherein the image is printed using a continuous drop ink jet printing process.
 16. (Original) A decorative laminate obtained by the process of Claim 8.
 17. (Currently amended) The laminate of Claim 16 wherein the image-bearing interlayer is laminated with at least one additional sheet of at least one other interlayer to produce a composite image-bearing interlayer, wherein the at least one additional interlayer sheet has a thickness sufficient to such that the total thickness of the composite interlayer falls within a range of from about 0.40 mm to about 2.29 mm, and wherein the ~~composite image bearing interlayer is further laminated with at least one sheet of~~ sheets of transparent materials are glass lites.
 18. (Cancelled)

Application No.: 10/519655
Docket No.: AD6899USPCT

Page 7

19. (Cancelled)
20. (Currently amended) A rigid thermoplastic interlayer sheet bearing an image on at least one of its surfaces ~~of the interlayer sheet prepared by the process of claim 1, the image being printed on the sheet by a process comprising the step: feeding a rigid interlayer sheet through an ink jet printer and ink jet printing an image on the sheet, wherein the interlayer has a Storage Young's Modulus of 50-1,000 MPa (mega Pascals) at 0.3 Hz and 25°C, as determined according to ASTM D 5026-95a, and wherein the rigid interlayer sheet has a finite thickness of less than or equal to about 0.38 mm.~~
21. (Currently amended) The rigid thermoplastic interlayer of Claim 20 wherein the rigid thermoplastic interlayer has a surface roughness of from about 5 μm to about 15 μm .
22. (Currently amended) The interlayer process of Claim 21 wherein the rigid thermoplastic interlayer has a surface roughness of from about 5 μm to about 15 μm and wherein the size of the image does not change by more than $\pm 1\%$ of the initial size of the image after drying at 60°C for 30 minutes after the image is printed.
23. (New) The process of Claim 1 wherein the ink-jet printing the image is carried out using pigmented ink.
24. (New) The process of Claim 8 wherein the sheets of transparent materials are glass lites.
25. (New) A process of forming a glass laminate comprising:
 - (a) ink-jet printing an image with pigmented ink on a rigid ethylene/(meth)acrylic acid copolymer ionomer interlayer sheet having (i) a thickness of about 0.025 mm to about 0.45 mm, and (ii) a Storage Young's Modulus of 50-1,000 MPa (mega Pascals) at 0.3 Hz and 25°C, as determined according to ASTM D 5026-95a, using an ink jet printer to obtain an image-bearing interlayer sheet, and
 - (b) laminating the image-bearing interlayer sheet to two glass lites.
26. (New) The process of Claim 25 wherein the ethylene/(meth)acrylic acid copolymer ionomer interlayer sheet has a surface roughness (Rz) between 5 and 15 μm .
27. (New) A process of forming a glass laminate comprising:
 - (a) ink-jet printing an image with pigmented ink on a rigid polyvinyl butyral interlayer sheet having (i) a thickness of about 0.025 mm to about 0.45 mm, and (ii) a Storage Young's Modulus of 50-1,000 MPa (mega Pascals) at 0.3 Hz and 25°C, as determined according to ASTM D 5026-95a, using an ink jet printer to obtain an

Application No.: 10/519655
Docket No.: AD6899USPCT

Page 8

image-bearing interlayer sheet, wherein the polyvinyl butyral interlayer sheet comprises plasticizer in an amount of less than 30 parts per hundred parts based on the weight of the polyvinyl interlayer sheet, and

(b) laminating the image-bearing interlayer sheet to two glass lites.

28. (New) A process of forming a glass laminate comprising:

(a) ink-jet printing an image with pigmented ink on a rigid ethylene/(meth)acrylic acid copolymer ionomer interlayer sheet having (i) a thickness of about 0.025 mm to about 0.45 mm, and (ii) a Storage Young's Modulus of 50-1,000 MPa (mega Pascals) at 0.3 Hz and 25°C, as determined according to ASTM D 5026-95a, using an ink jet printer to obtain an image-bearing interlayer sheet,

(b) providing at least one additional ethylene/(meth)acrylic acid copolymer ionomer interlayer sheet, and

(c) laminating the image-bearing interlayer sheet and the at least one additional (meth)acrylic acid copolymer ionomer interlayer sheet between two glass lites.